The Government has approved the implementation of Integrated Pest Management Programme which *inter-alia* focusses on adoption of suitable cultural and mechanical practices, use of bio-pesticides and botanicals and judicious use of chemical pesticides based on economic threshold level of pests.

(d) Question does not arise.

Ban on the use of Chemicals insecticides by Western Countries

1558. SHRI SOM PAL : Will the Minister of AGRICULTURE be pleased to state :

(a) whether it is a fact that the developed countries of the west have banned the use of a number of chemicals insecticides and pesticides in their countries ;

(b) if so, what are the names of such chemicals ;

(c) whether it is a fcat that many of these are still in use in our country, and because of these the incidence of toxic residues in our soils, water sources, vegetation, edible items is increasing beyond prescribed international limits ; and

(d) if so, what are the details thereof and what is being done to overcome the problem ?

THE MINISTER OF STATE IN THE DEPARTMENT OF AGRICULTURE AND CO-OPERATION IN THE MINISTRY OF AGRICULTURE (SHRI S. KRISHNA KUMAR) : (a) Yes, Sir.

(b) The Statement is enclosed. (*see* below)

(c) and (d) The list of pesticides permitted by different countries is often at variance because of different agro-climatic conditions and pest problems. The Registration Committee constituted under the Insecticides Act, 1968 evaluates the comprehensive data on toxicity, bio-efficacy including residues of persticides and registers it only when it is found safe. When the recommended pesticides are used as per the Good Agricultural Practices regarding their doses, time and method of application etc., their residue may not occur beyond the prescribed tolerence limits.

The survey conducted by the Directorate General of Health Services and Indian Council of Medical Research indicate the presence of HCH and DDT in various articles of food and in a few cases beyond the permissible limit laid down under PFA Rules. The State/UT Governments have been alerted to be more vigilant and ensure using the recommended pesticides as per the Good Agricultural Practices to overcome such problems.

Statement

LIST OF CHEMICAL INSECTICIDES AND PESTICIDES THE USE OF WHICH HAVE BEEN BANNED IN SOME OF THE DEVELOPED COUNTRIES

Sl. No.	Name of Chemical Pesticides
1	alpha-HCH
2	alpha-Naphthylthiourea (ANTU)
3	beta-HCH
4	delta-HCH
5	gamma-HCH
6	o-Dichlorobenzene
7	Acetylene
8	Acrylonitrile
9	Alachlor
10	Aldicarb
11	Aldrin
12	Aluminium Phosphide
13	Aminocarb
14	Amitraz
15	Amitrole
16	Anabasine
17	Anabasine sulfate
18	Aramite
19	Aresenic acid and arsenates
20	Arsenic and arsenic compounds
21	Arsenious acid and arsenites
22	Arsenious acid, sodium salt
23	Azinphos-ethyl
24	Azinphos-methyl
25	Azobenzene
26	Azocyclotin
27	Benomyl
28	Bifenthrin
29	Bromide
30	Binapacryl
31	Bromocyclen
32	Bromomethane
33	Cadmium and cadmium compounds
34	Calcium arsenate
35	Calcium cyanide

Sl. No.	Name of Chemical Pesticides
36	Camphechlor
37	Captan
38	Carbaryl
39	Carbofuran
40	Carbon disulfide
41	Carbon tetrachloride
42	Carbophenothion
43	Carbosulfan
44	Chloralose
45	Chloranil
46	Chlorbicyclen
47	Chlordane
48	Chlordecone
49	Chlordimeform
50	Chlorfenethol
51	Chlorfenson
52	Chlorfensulphide
53	Chlorinol
54	Chlorobenzilate
55	Chloroform
56	Chlorophicrin
57	Chloropropylate
58	Chlorthal-dimethyl
59	Chlorthiophos
60	Copper acetaorsenite
61	Copper arsenate (basic)
62	Coroxon
63	Crimidine
64	Cyanide
65	Cycloheximide
66	Cyhexatin
67	Demephion
68	Demeton (O and S)
69	Demeton-O-Methyl
70	Demeton-S-Methyl
71	Dialifos
72	Diallate
73	Dichlofenthion
74	Dicofol
75	Dicrotophos
76	Dieldrin
77	Dienochlor
78	Diethylstilbestrol
79	Difenzoquatmethyl sulfate
80	Dimefox
81	Dimethoate
82	Dinoseb
83	Dinoseb (Amine)
84	Dinoseb-acetate
85	Dinoterb
86	Dinoterb-acetate
87	Dioxacarb
88	Disulfoton
89	Diuron
90	Drazoxolon
91	DDB
92	DDD
93	DDE
94	DDT
95	DNOC
96	Endosulfan
97	Endothal-sodium
98	Endothion
99	Endrin
100	Ethoprosfos
101	Ethylene dibromide (EDB)
102	Ethylene dichloride
103	Ethylene oxide
104	Ethylenebisdithiocarbamic acid
105	Ethylformate
106	Ethylmercury chloride
107	EPN
108	Penerimol
109	Penezophor
110	Pespropathrin
111	Fenson
112	Fensulfothion
113	Fentin hydroxide
114	Fluorbenside
115	Fluoroacetamide
116	Fluoroacetic acid
117	Flutriafol
118	Folpet
119	Fomesafen
120	Fonofos
121	Fumiron (With mercury)
122	Granosan M.
123	Gazatine triacetate
124	Heptachlor
125	Heptachlor epoxide
126	Hexachlorobenzene
127	Hexachlorobutadiene
128	Hydrogen cyanide
129	HCH-mixed isomers
130	Imidazole-2-thiol
131	Isobenzan
132	Isodrin
133	Kadethrin
134	Kelevan
135	Lead and lead compounds

Sl. No.	Name of Chemical Pesticides
136	Lead arsenate
137	Lead arsenite
138	Leptophos
139	Linuron
140	Malathion
141	Maleic hydrazide
142	Maneb
143	Mecarbam
144	Mecoprop sodium salt
145	Medinoterb acetate
146	Melipax
147	Menazon
148	Mephosfolan
149	Mercuric chloride
150	Mercuric oxide
151	Mercurous chloride
152	Mercury and mercury compounds
153	Metham sodium
154	Methamidofos
155	Methanaearsonic acid
156	Methidathion
157	Methomyl
158	Methoxychlor
159	Methoxyethylmercury acetate
160	Mevinpho.
161	Mexacrabate
162	Mirex
163	Monocrotophos
164	Monolinuron
165	Monuron
166	Morfamguat
167	Nicotine
168	Nicotine sulphate
169	Nitazin
170	Nitrofen
171	Octachlorodipropyl ether
172	Omethoate
173	Oxyfluorfen
174	Oxyth ioquinox
175	Paraquat (dischloride)
176	Paracuat-bis (methyl sulfate)
177	Parathion
178	Parathion methyl
179	Pentachlorophenol
180	Perthane
181	Phenarsazine chloride
182	Phenkapton
183	Phenylmercury acetate
184	Phorate
185	Phisacetim
186	Phosmet
187	Phosphamidon
188	Phosphine
189	Picloram
190	Polychlorinated biphenyis (PCBs)
191	Polychlorinated triphenyls (PCTs)
192	Potasan
193	Potassium arsenite
194	Pretilachlor
195	Prochloraz
196	Pronamide
197	Propham
198	Protein
199	Prothoate
200	Pyrinuron
201	Quintozene
202	Rovral TS
203	Safrole
204	Schradan
205	Scilliroside
206	Selenium and seleniium compounds
207	Silvex
208	Sodium arsenate
209	Sodium cacodylate
210	Sodium cyanide
211	Sodium fluoride
212	Sodium fluoroacetate
213	Sodium metaarsenite
214	Sodium methanearsonate
215	Sodium silicofluride
216	Stilbene
217	Strobane
218	Strychnine and salts
219	Strychnine nitrate
220	Strychnine sulphate
221	Sulfotep
222	Sulprofos
223	Tebuthiuron
224	Tetradifon
225	Tetraethylpyrophosphate (TEPP)
226	Tetrasulerostee
227	Thallium and Thallium compounds
228	Thallium sulphate
229	Thiometon
230	Thiouracil
231	Thiram
232	Triazophos
233	Tributyl phosphorotrithioite
234	Tridemorph
235	Vamidothion
236	Vinul chloride
237	Zinc phosphide

Sl. No.	Name of Chemical Pesticides
238	Zinophos
239	Ziram
240	O, O-Dimethyl-s-Ethylmercaptoethyl thiophosphate
241	1,1,2,2-Tetrachloroethane
242	1,2-Dibromo-3-Chloropropane (DBCP)
243	2-Methoxyethyimercury chloride (M EMC)
244	2-Thiohydantoin
245	2,3,4,5-Tetrachlorophenol
246	2,3,4,6-Tetrachlorophenol
247	2,3,5,6-Tetrachlorophenol
248	2,4-Dinitrophenol
249	2,4-DB
250	2,4-DP
251	2,4,5-T
252	2,4,5-Trichlorophenol.

Effect of Chemical Fertilizers on Soil Structures

1559. SHRI SOM PAL : Will the Minister of AGRICULTURE be pleased to state :

(a) whether it is a fact that chemical fertilizers are affecting our soil structures & soil organisms adversely ;

(b) whether it is also a fact that several micro-nutrients in our soil are depleting due to over exploitation, monoculturing of a few crops and over use of fertilizers ;

(c) if so, what are the details thereof and what is being done to tackle these problems ; and

(d) if not, the reasons therefor ?

THE MINISTER OF STATE IN THE MINISTRY OF AGRICULTURE (SHRI ARVIND NETAM) : (a) There are no reports of chemical fertilizers adversely affecting soil structure and soil organisms .

(b) Micro-nutrient deficiencies may occur due to their inadequate presence in soils Exclusive use of high analysis chemical fertilizers which contain only N.P.K. and may also result in micro-nutrient deficiencies in intensively cultivated soils.

(c) and (d) The statement of micro-nutrient survey conducted by ICAR indicating the sumber of soil samples analysed and the percent sample found non-standard is enclosed (*See below*)

Apart from recommending the use of micro-nutrient fertilizers, integrated use of organic manures and chemical fertilizers is advocated. Organic manures also supply micro-nutrients and help in building soil structure and soil micro-flora.

Statement

MICRO-NUTRIENT SURVEY BY ICAR

Extent of Micronutrient-deficiencies in different States

State	Zinc		Copper		Maganese		Iron		Boron	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
1 Andhra Pradesh . . .	4845	53	3663	0	3637	1	3596	1		
2 Bihar	10277	45	10476	2	9228	1	9462	4	1487	38
3 Gujarat	26016	24	25943	5	25971	1	24576	8	1991	2
4 Haryana	19508	64	18274	3	17944	4	17844	25		
5 Madhya Pradesh . . .	10382	65	9541	1	9636	3	9581	3		
6 Punjab	13261	50	13261	1	13261	2	13261	13		
7 Tamil Nadu . . .	12478	43	11447	21	11709	8	12071	15		
8 A. P.	8754	64	8057	1	8135	3	8636	8		
9 Karnataka	2318	25	2318	9	2318	1	2318	2		

NOTE : (1)—No. of samples analysed.
(2)—Examples found deficient.